70 to 75 fathoms. After careful washing I found it contained a considerable number of that rare Rhizopod, *Technitella legumen*, Norman. The tests are in very fair condition, but through overwashing many are broken up, and none were found with the coating of sand or mud which sometimes covers them. A very good figure of this Foraminifer was given in this magazine in 1878, and one with the arenaceous coating is given in the 'Challenger' Report, vol. ix. plate xxv.

Fragments of a spicular test have been found by me in three or four other dredgings from the Irish Sea, but this is the first instance in which perfect tests have occurred. I should be glad to learn whether any other observer has obtained it in Irish waters.

The same dredging also contained a number of the very rare *Lagena Hertwigiana*, Brady, of which a figure is given in the 'Challenger' Report, vol. ix. plate lviii., and description at p. 470. This makes the fourth locality from which this *Lagena* has been obtained, the depths at which the others occurred being respectively 155 fathoms (Raine Island), 2600 fathoms (south of Australia), and 150 to 200 fathoms (near Bergen, Norway). Very fine examples of *Hyperammina elongata*, *Reophax scorpiurus*, and *Haplophragmium pseudospirale* were common.

I may add that examples were submitted for confirmation to my friend H. B. Brady, who unhesitatingly identified them as named.

19 Hughenden Avenue, Belfast,
October 18, 1884.

## *On the Occurrence of a Process resembling Copulation in* Comatula mediterranea. By Dr. C. F. Jickeli.

While I was occupied with this organism in the Zoological Institute at Graz I observed a process which, like that described by H. Ludwig in *Asterina gibbosa* *, showed the closest resemblance to a copulation, and which I will here communicate, as the statements of this nature with regard to Echinoderms seem to me to be very scanty.

Two specimens of this *Comatula*, which were observed for several days in a large aquarium, were found one morning seated close together, with the arms closely entwined. In the evening of the same day, therefore about twelve hours after the discovery of this condition of things, the two individuals were still united; but on the following morning, or twenty-four hours after the first observation, the union was dissolved.

Another still less expected process now commenced. The arms fell off simultaneously with the separation of the pinnules, and

* Zeitschr. f. wiss. Zool. Bd. xxxvii.

broke up into the individual joints. At last only the two oral disks remained.

The pinnules, when fished out, were in part filled with semen or covered with adherent ova in the *Blastula*-stage, so as to confirm the probable supposition that this entwining of the two individuals might be a process of fertilization.

The ova passed in the aquarium through a normal development as far as the *Pentacrinus*-stage. The two armless *Comatula*-calyces continued for some days to live in the aquarium, and were then killed for histological investigation.

This observation seems to support Studer's * supposition that, at least in many cases, the separation of the arms of many Asterida stands connected with the evacuation of the sexual products.—*Zoologischer Anzeiger*, no. 174, August 18, 1884, p. 448.

*On the Organization of* Anchinia. By M. N. Wagner.

Last winter I found at Naples in great abundance a phase of development of *Anchinia rubra* different from that described by Vogt, Kowalewsky, Barrois, and Corrotsyeff. As regards its general appearance, this phase is characterized by a regularly globular form of body, and, further, it did not possess that long caudal appendage which characterizes the form hitherto known.

This phase was agamic. Twice I met with individuals with a small stolon covered with buds; but this stolon differed essentially from that of the sexual form.

The nervous system of this phase presents two pairs of very strong nerves, which run towards the anterior and posterior apertures of the body, and to them I give the name of *anterior* and *posterior nerves*. These nerves are analogous to the nerves of *Doliolum* and *Ascidia*.

Besides these nerves the ganglion gives origin, at its posterior part, to the *epithelial nerves*, which terminate in the cells of the external and internal epithelium of the body; to a nerve running towards the olfactory organ (the issue of the hypophysary gland); and to a *pneumogastric nerve*, which ramifies in the endostyle, the vibratile bands, and the branchiæ. In its upper part the ganglion also gives off the nerves running towards the surface of the body. The two sides of the ganglion give origin to the nerves terminating in the epithelial cells. Lastly, the posterior part of the ganglion presents, besides the *posterior nerves*, the *cloacal nerves* and the nerves running to the *vibratile sac*, that is to say towards the sac in which the posterior extremities of the vibratile bands terminate. The termination of the nerves is excessively varied, which gives reason to suppose that the specialization of the organs here reaches a very high degree.

* Monatsbericht der Berlin. Akad. 1876.